



AUTOPILOT

Autopilot Project Liability Issues

This presentation was given by Dr. Jordanne Monseau during the Public Webinar of 4 July 2019, on Legal perspectives of using IoT for AD, this in the context of AUTOPILOT H2020 project.
For any request please contact jallard@mail.ertico.com or the speaker.

Concept of liability – methodology

Cause(s):

- Act (intent to cause a consequence);
- Negligence (lack of intent to cause a consequence);
- Legal involvement (liability for the act or the negligence done by someone or something else).

Causal Link

Consequence(s):

- Material damage;
- Immaterial / moral damage ;
- Personal injury.

Concept of liability – methodology

Traditional driving accidents are normally caused by:

Human negligence

including drivers, passengers and pedestrians

Defective and malfunctioning vehicles

including embedded products and parts of the vehicle

Problems with road infrastructure

including malfunctioning traffic lights and incorrect road signs

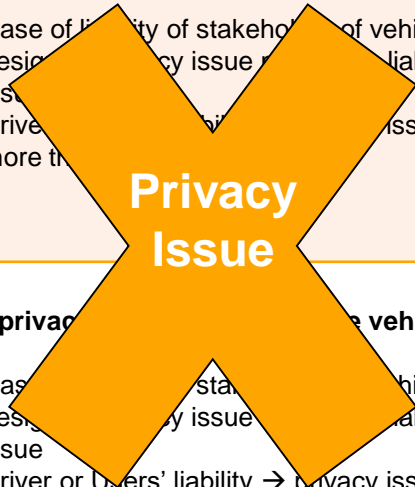
AD → more elements and more stakeholders...

Concept of liability applied to AD – study

	Material damage	Moral damage	Personal injury
Inside of the vehicle	<p>To products embedded and/or connected to the vehicle:</p> <ul style="list-style-type: none"> • Driver or Users' liability → same issue as before • Case of liability of stakeholders of vehicle design → not new issue but more complex than before • Case of liability of the AI decision-making process → new issue 	<p>To privacy of users and driver:</p> <ul style="list-style-type: none"> • Case of liability of stakeholder of vehicle design → privacy issue more than liability issue • Driver or Users' liability → privacy issue more than liability issue 	<p>To users and driver:</p> <ul style="list-style-type: none"> • Driver's liability → same issue as before • Case of liability of stakeholders of vehicle design → not new issue but more stakeholders than before • Case of liability of the AI decision-making process → new issue
Outside of the vehicle	<p>To products on and/or around the road:</p> <ul style="list-style-type: none"> • Driver's liability → same issue as before • Case of liability of stakeholders of vehicle design → not new issue but more complex than before • Case of liability of the AI decision-making process → new issue 	<p>To privacy of people around the vehicle:</p> <ul style="list-style-type: none"> • Case of liability of stakeholder of vehicle design → privacy issue more than liability issue • Driver or Users' liability → privacy issue more than liability issue 	<p>To people around the vehicle:</p> <ul style="list-style-type: none"> • Driver or Users' liability → same issue as before • Case of liability of stakeholders of vehicle design → not new issue but more stakeholders than before • Case of liability of the AI decision-making process → new issue

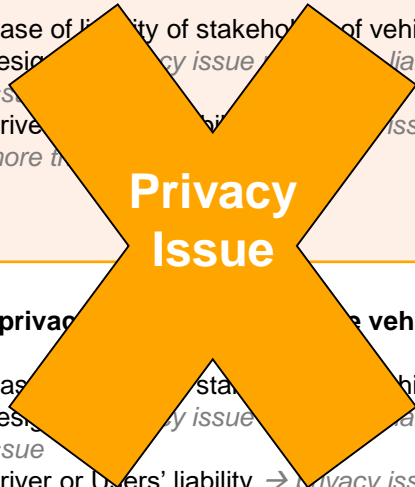
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Concept of liability applied to AD – study

	Material damage	Moral damage (Privacy)	Personal injury
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Analyze of two use cases – 1st use case – result

Material damage caused to products embedded/connected to the vehicle by stakeholders of vehicle design

Who are stakeholders of vehicle design ?

- ❖ Automaker
- ❖ Connectivity Service Provider
- ❖ Mobility Service Provider

Some problems can already be underlined:

- ❖ Product liability: manufacturing defect vs. design defect
- ❖ IoT liability: software vs. connectivity

Analyze of two use cases – 1st use case – result

Material damage caused to products embedded/connected to the vehicle by stakeholders of vehicle design (on the basis of the results of the survey)

- ❖ **Automaker's liability** (ex: product defect): major liability for general equipment failure, but equal liability for breakdown of data integrity / misinformation and out-dated software applications.
- ❖ **Connectivity & Mobility Service Providers' liability** (ex: bad connection with the product and wrong software product development): major liability for breakdown of data integrity / misinformation and out-dated software applications, but equal liability for general equipment failure
- ❖ **Driver and Users' liability** (product misuse and wrong data transfer to the product): no major liability and low equal liability in other cases

Analyze of two use cases – 1st use case – result

Solutions

- ✓ **Necessity to delineate each liability into the contracts signed between the stakeholders**
- ✓ **Problem for precisely reverberating liabilities to preserve the continuity of the chain of responsibility**
(driver → original equipment manufacturer → subcontractors (software development, IT infrastructure, etc.)
- ✓ **Dedicated insurances for each stakeholder and respective risks**

Analyze of two use cases – 2nd use case – result

Personal injury caused to people around the vehicle by AI decision-making process

What is the role of AI in AD in relation to the driver ?

- ❖ AI is only a passive support of the driver but all decision are made by the driver itself
 - ❖ Same as before
- ❖ AI is an active support of the driver and the decisions can be made by either the driver or the AI itself
 - ❖ Delineation of liability more complex: how should responsibility to override the autonomous system be delineated ?
- ❖ AI is the driver and the driver becomes a passenger
 - ❖ New question of the responsibility of AI itself ?
 - ❖ Decision done by AI
 - ❖ Development of AI made by a developer
 - ❖ Learning of AI made by driver's behaviour
 - ❖ How far will the autonomous system be completely representative of the driver or the developer ?
 - ❖ Problem of shared fleet of a company with involvement of a new stakeholder: fleet operator ?

Analyze of two use cases – 2nd use case – result

Personal injury caused to people around the vehicle by AI decision-making process (on the basis of the results of the survey)

- ❖ **Automaker's liability** (ex: AI defect): major liability for general equipment failure, but equal liability for breakdown of data integrity / misinformation and out-dated software applications.
- ❖ **Connectivity & Mobility Service Providers' liability** (ex: bad connection with AI and wrong AI software development): major liability for breakdown of data integrity / misinformation and out-dated software applications, but equal liability for general equipment failure
- ❖ **Driver and Users' liability** (AI misuse and wrong data transfer to AI): no major liability and low equal liability in other cases

Analyze of two use cases – 2nd use case – result

Solutions

- ✓ Necessity to detail the authorized vehicle use and the software development process
- ✓ Problem to consider the driver as a passenger in case of machine learning defect
- ✓ Specific insurance of vehicle in case of AI in order to financially indemnify

Conclusion: what new for insurance ?

Toward elimination of human errors



Decrease of car accidents and of small insurance claims



Necessity to redefine the insurance business model and to create new forms of insurance (for example, for AI)



Presentation of Mrs. Adelaide Rossi

Thank you for your attention